information of these points, thereby obtaining the shape/contour information of the 3D object.

2. Delete the original paragraph that begins line 10 and ends line 12 of page 10 of the Specification.

3. The following paragraph replaces the original paragraph that begins line 22 and ends line 23 of page 10 of the Specification:

Figure 9 shows a meshing process flowchart according to one embodiment of the present invention;

4. The following paragraph replaces the original paragraph that begins line 7 and ends line 9 of page 19 of the Specification:

According to one aspect of the present invention, an observation from the distortions of shape **222** provides the following properties:

5. The following paragraph replaces the original paragraph that begins line 11 and ends line 14 of page 21 of the Specification:

Based on the known geometry of the calibration disk and the measured major axes and minor axes **224-227** along with the above three properties, a computation process can be constructed to estimate uniquely the following parameters at **312**:

6. The following paragraph replaces the original paragraph that begins line 18 of page 26 and ends line 3 of page 27 of the Specification:

There are now *n* object images and a corresponding number of respective mask images derived from side view images (C1, C2 ... Cn). As each of the mask images is a projection of the 3D object onto a specific 2D plane, the group of the mask images inherently constrains a 3D region in which the 3D object exists. Hence a volumetric analysis now proceeds along with the respective mask images. The volumetric analysis herein is to determine the vertices of the surface of the 3D object in a 3D space. The vertices of the 3D object define a volumetric boundary of all the volumetric cells in a 3D space so as to define the 3D region.

7. The following paragraph replaces the original paragraph that begins line 14 and ends line 20 of page 27 of the Specification:

A space carving process is devised to perform the volumetric analysis. Intuitively, a 3D object is assumed to fit within a single cube in a 3D space. The single large cube now needs to be carved gradually in order to fit the object properly. The carving process starts with subdividing the cube into smaller cubes and compares each of the smaller cubes with each of the mask images. The resultant carved model is referred to as a 3D region of the object.

8. The following paragraph replaces the original paragraph that begins line 4 and ends line 10 of page 30 of the Specification:

It may be understood that the "gray" cubes may be caused by the boundary of the object and shall be further divided up to a predefined degree of refinement to decide the boundary. The same procedure can be recursively applied until the cubes are subdivided up to the refinement, then the collection of "black" cubes defines a volumetric boundary of an object in a 3D space.

9. The following paragraph replaces the original paragraph that begins line 23 of page 32 and ends line 14 of page 33 of the Specification:

The rest of the process at **868**, **872** or **874**, **876** and **878** are similar and have been described above. However, when the last line of a mask image is done, the process will branch out from **878** to **880** to decrement j by one to move to a line above and starts at **856**. Then the process continues along the line till the very first pixel is processed. What is important here is the judgment at **860**. The process checks if the neighboring encoded values correspond to the same color (either the background or the foreground) as the pixel at (i, j) of the mask image. If one of the neighboring encoded values is not the same, the encoded value will be either 1 or -1, otherwise it will be just an increment of the smallest value among the absolute value of the neighboring encoded values, for example, among the neighboring encoded values 2, 3 and 4, the smallest value 2 is incremented to 3, or among the neighboring encoded values -2, -3 and-4, the value (–2) is incremented to (–3). It can be appreciated that the computation of the process increase linearly in the number of pixels in the mask images.

10. The following paragraph replaces the original paragraph that begins line 1 ends line 21 of page 51 of the Specification: